US005198493A

United States Patent [19]

Holmberg et al.

[11] Patent Number: 5,198,493

[45] Date of Patent: Mar. 30, 1993

[54] METHOD OF COVALENTLY BONDING BIOPOLYMER TO A SOLID HYDROPHILIC ORGANIC POLYMER

[75] Inventors: **Krister Holmberg**, Molndal; **Karin Bergstrom**, Kungälv, both of Sweden

[73] Assignee: **Berol Nobel AB**, Stenungsund, Sweden

[21] Appl. No.: **759,018**

[22] Filed: **Sep. 13, 1991**

[30] **Foreign Application Priority Data**

Sep. 13, 1990 [SE] Sweden 9002909

[51] **Int. Cl.**[5] **C08H 5/12**; C08L 89/00; C08L 1/00

[52] **U.S. Cl.** **525/54.1**; 525/54.2; 525/54.21; 525/54.23; 525/54.24; 525/54.3; 525/54.31

[58] **Field of Search** 525/54.1, 54.2, 54.21, 525/54.23, 54.24, 54.28, 54.3, 54.31

[56] **References Cited**

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Primary Examiner—Nathan M. Nutter
Assistant Examiner—Jeffrey Culpeper Mullis

[57] **ABSTRACT**

A process for covalently bonding biopolymer, such as protein, to an organic polymer surface coated with hydrophilic nonionic polymer having groups reactive with the biopolymer, which comprises reacting biopolymer with the surface in a nonpolar reaction medium, preferably a microemulsion, containing from about 0.5 to about 25% water by weight, having a dielectric constant less than 10% of the dielectric constant of pure water; and the product comprises a biopolymer immobilized on a hydrophilic solid surface having a nonionic polymer and a hydrophilic layer, coupled thereto via biopolymer-reactant groups of the nonionic polymer, and accordingly has low spontaneous adsorption of proteins and other biopolymers through electrostatic attraction and/or hydrophobic interaction.

11 Claims, No Drawings